

AMENDMENTS TO THE CLAIMS:

Claim 1. (Currently amended) A transceiver circuit of a network node for converting a signal received from a transmission medium to a decoded signal that can be recognized recognised by a higher layer and transmitting packets received from said higher layer to said transmission medium, the circuit comprising characterised by:

selector circuitry; and

control circuitry for controlling the selector circuitry for supplying the decoded signal to said higher layer and supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at the end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state.

Claim 2. (Currently amended) The transceiver circuit of claim 1, characterised in that wherein said control circuitry is responsive to end of said predefined time interval for supplying said decoded signal to said higher layer, instead of said simulated idle signal.

Claim 3. (Currently amended) The transceiver circuit of claim 1, characterised in that wherein said predefined time interval is equal to a turnaround time of said transmission medium.

Claim 4. (Currently amended) The transceiver circuit of claim 1, characterised in that wherein said control circuitry is configured to detect a data end message as an indication of the end of transmission of said packet.

Claim 5. (Currently amended) The transceiver circuit of claim 1, characterised in that wherein said transmission medium is comprises a serial bus and that wherein said circuit further comprises a serial to parallel converter is provided for converting a signal from said serial bus to a parallel signal, and a decoder for converting the parallel signal to said decoded signal.

Claim 6. (Currently amended) The transceiver circuit of claim 5, ~~characterised in that~~ wherein said serial to parallel converter is connected to said serial bus via an IEEE-1394 interface.

Claim 7. (Currently amended) The transceiver circuit of claim 3, ~~characterised in that~~ wherein said control circuitry comprises:

a start-of-child-notify detector for detecting the start timing of a child-notify signal from said higher layer which is transmitted from the network node to a child node as a response to a signal from the child node;

an end-of-parent-notify detector for detecting the end timing of parent-notify signal received from said child node;

first counter circuitry for incrementing a first count value in response to the detection of the start timing of said child-notify signal by the start-of-child-notify detector until said end-of parent-notify detector detects the end timing of said parent-notify signal; and

comparator circuitry for comparing said first count value with a second count value which corresponds to said predefined time interval and controlling said selector circuitry according to relative values of said first count value to said second count value.

Claim 8. (Currently amended) The transceiver circuit of claim 7, ~~characterised in that~~ wherein said comparator circuitry comprises:

an end-of-data-end detector for detecting the end timing of a data-end signal transmitted from said higher layer to said transmission medium; and

second counter circuitry for incrementing a second count value in response to the detection of the end timing of said data-end signal by the end-of-data-end detector until the second count value equals the incremented first count value and controlling said selector circuitry for supplying said idle signal to said higher layer for an interval during which said second counter circuitry continues to increment said second count value.

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Claim 9. (Currently amended) A communication system formed by a plurality of nodes interconnected by transmission lines, ~~characterised in that~~ wherein each of said nodes includes the transceiver circuit as claimed in claim 1.

Claim 10. (Currently amended) A communication method for a network node for converting a signal received from a transmission medium to a decoded signal that can be recognized recognised by a higher layer and transmitting packets received from said higher layer to said transmission medium, the method comprising ~~characterised by the steps of~~:

supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at the end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state; and

(b) supplying the decoded signal to said higher layer, instead of said idle signal, at the end timing of said predefined time interval.

Claim 11. (Currently amended) The method of claim 10, ~~characterised in that~~ wherein said predefined time interval is equal to a turnaround time between said network node and a node connected to a distant end of said transmission medium.

Claim 12. (Currently amended) A recording medium for recording a control program for describing the operation of a network node which converts a signal received from a transmission medium to a decoded signal that can be recognized recognised by a higher layer and transmits packets received from said higher layer to said transmission medium, ~~characterised in that~~ wherein said control program comprises instructions for ~~contains~~ the steps of:

supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at the end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state; and

supplying the decoded signal to said higher layer, instead of said idle signal, at the end timing of said predefined time interval.

Claim 13. (Currently amended) The recording medium of claim 12, ~~characterised in that~~ ~~wherein~~ said predefined time interval is equal to a turnaround time between said network node and a node connected to a distant end of said transmission medium.

Claim 14. (Currently amended) A communication method for a network node attached to a serial bus, the method comprising ~~the steps of~~:

setting a state machine in a receive mode;

exchanging signals between the network node and a remote node attached to a distant end of the bus and determining therefrom a turnaround time between said nodes; and

setting the state machine in an idle mode for an interval beginning with an end timing of a packet transmitted from the node to said bus until said interval corresponds to the turnaround time.

Claim 15. (Currently amended) A communication method for a network node attached to a serial bus, the method comprising ~~the steps of~~:

setting a state machine in a receive mode;

incrementing a count value beginning with a start timing of a child notify signal transmitted from the node to said bus and terminating the increment of the count value at an end timing of a parent notify signal received by the node from said bus; and

setting the state machine in an idle mode for an interval beginning with an end timing of a packet transmitted from the node to said bus until said interval corresponds to the incremented count value.

Claim 16. (Original) A network node attached to a serial bus, comprising:
first circuitry for exchanging signals between the network node and a remote node

attached to a distant end of the bus and determining therefrom a turnaround time between said nodes; and

second circuitry for supplying a signal received from the serial bus to a higher layer and supplying, instead of said received signal, an idle signal to said higher layer for an interval beginning with an end timing of a packet transmitted from said higher layer to said bus until said interval corresponds to the turnaround time, said idle signal indicating that the network node is in an idle state.

Claim 17. (Original) A network node attached to a serial bus, comprising:

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first circuitry for incrementing a count value beginning with a start timing of a child notify signal transmitted from the node to said bus and terminating the increment of the count value at an end timing of a parent notify signal received by the node from said bus; and

second circuitry for supplying a signal received from the serial bus to a higher layer and supplying, instead of said received signal, an idle signal to said higher layer for an interval beginning with an end timing of a packet transmitted from said higher layer to said bus until said interval corresponds to the turnaround time, said idle signal indicating that the network node is in an idle state.

Claim 18. (Currently amended) The transceiver circuit of claim 2, characterised in that wherein said predefined time interval is equal to a turnaround time of said transmission medium.

Claim 19. (Currently amended) The transceiver circuit of claim 2, characterised in that wherein said control circuitry is configured to detect a data end message as an indication of the end of transmission of said packet.

Claim 20. (Currently amended) The transceiver circuit of claim 3, characterised in that wherein said control circuitry is configured to detect a data end message as an indication of the end of transmission of said packet.

Claim 21. (New) The transceiver circuit of claim 1, wherein said central circuitry comprises:

a start-of-child-notify detector for detecting the start timing of a child-notify signal from said higher layer which is transmitted from the network node to a child node as a response to a signal from the child node.

Claim 22. (New) The transceiver circuit of claim 21, wherein said central circuitry comprises:

an end-of-parent-notify detector for detecting the end timing of parent-notify signal received from said child node; and

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first counter circuitry for incrementing a first count value in response to the detection of the start timing of said child-notify signal by the start-of-child-notify detector until said end-of parent-notify detector detects the end timing of said parent-notify signal.

Claim 23. (New) The transceiver circuit of claim 22, wherein said central circuitry comprises:

comparator circuitry for comparing said first count value with a second count value which corresponds to said predefined time interval and controlling said selector circuitry according to relative values of said first count value to said second count value.

Claim 24. (New) A transceiver circuit of a network node for converting a signal received from a transmission medium to a decoded signal that can be recognized by a higher layer and transmitting packets received from said higher layer to said transmission medium, the circuit comprising:

selector circuitry; and

means for controlling the selector circuitry for supplying the decoded signal to said higher layer and supplying, instead of said decoded signal, an idle signal to said higher layer for a predefined time interval which starts at the end timing of a packet transmitted from said higher layer to said transmission medium, said idle signal indicating that the network node is in an idle state.